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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,543	01/15/2002	Andrei Viktorovich Grebennikov	17778	4982

7590

12/24/2002

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EXAMINER

NGUYEN, KHAI M

ART UNIT PAPER NUMBER

2819

DATE MAILED: 12/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,543

Applicant(s)

GREBENNIKOV ET AL.

Examiner

Khai M. Nguyen

Art Unit

2819

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The application has not been checked to the extent necessary to determine the presence of all possible typographical and grammatical errors. However, Applicant's cooperation is requested in correcting any errors of which he/she may become aware in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in
(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or
(2) a patent granted on an application for filed under treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language

3. Claims 1 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Oskowsky et al. (US 6,377,117).

Regarding claim 1, Oskowsky et al. suggests/discloses a switching amplifier may comprise at least two selectable stage power amplifiers (column 3, lines 42-48) and wherein each of the selectable stage power amplifiers having a plurality of power amplifiers arranged in parallel with associated switches for selectively switching on or off the plurality of the power amplifiers to produce a desired power level (see Fig. 4 and the abstract).

Regarding claim 19, Oskowsky et al. teaches the switching amplifier of claimed invention (see the rejected claim 1). Therefore, the switching amplifier would also carry out the method of claim 19.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-18 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oskowsky et al. (US 6,377,117) in view of King et al. (US 6,181,208) and Wang et al. (US 6,326,849).

Regarding claims 2-5, Oskowsky et al. discloses the claimed amplifier except for the controllable matching network. King et al. teaches a switchable amplifier having a controllable (by the state determination circuitry 108; it also controls the output power levels of the switching amplifier, as shown in Fig. 1) matching network being coupled to an output port and switchable power amplifiers. It would have been obvious to one person having ordinary skill in the art at the time the invention was made to provide a controllable matching network at an output end for combining output power levels of the switchable amplifier.

Regarding claims 6-8, either the PA controller (56) taught by Oskowsky et al. reference or the state determination circuit (108) taught by King et al. reference was designed for selectively controlling the plurality of transistor amplifiers in the first and

second stages and each of these stages may have only two parallel transistor amplifiers.

Regarding claims 9-10, it is known (for example see the cited reference, Wang et al. US 6,326,849) in the art that when coupling two amplifiers to form a cascaded amplifier, an interstage-matching network is normally provided between the two amplifiers for matching the output/input impedance of the first and second cascaded amplifiers respectively. Therefore, when connecting (as suggested in the abstract of the Oskowsky et al. reference) a plurality of parallel power amplifiers to form a cascaded amplifier, an interstage-matching network would be needed for the reason set above.

Regarding claims 11-12, Oskowsky et al. in view of King et al. teaches the switching amplifier of claim 2, wherein the matching network (combining network 106) *may be implemented* by multiplicity of different circuits includes a mechanical relay, a single-pole, a SPDT, a FET switch, a diode switch or a combination of inductor, capacitor, and transmission line components (see column 5, lines 23-29).

Regarding claims 13-, Oskowsky et al. discloses (Fig. 4 and the abstract) a wireless device may include the first stage, the second stage, and the state determination circuit (it is shown as a PA controller 56) of the claimed invention except for the output circuit. King et al. teaches a switchable amplifier for using in wireless devices having an output controllable (by the state determination circuitry 108; it also controls the output power levels of the switching amplifier, as shown in Fig. 1) matching

network being coupled to an output port and switchable power amplifiers. It would have been obvious to one person having ordinary skill in the art at the time the invention was made to provide a controllable matching network at an output end for combining output power levels of the switchable amplifier.

Regarding claims 14-15, either the PA controller (56) taught by Oskowsky et al. reference or the state determination circuit (108) taught by King et al. reference was designed for selectively controlling the plurality of transistor amplifiers in the first and second stages to generate a desired output power level and each of these stages may have only two parallel transistor amplifiers.

Regarding claims 16-17, Oskowsky et al. teaches that each of the plurality transistor power amplifier stages may comprise at least two or more parallel transistor amplifiers (as seen in Fig. 4 and the abstract).

Regarding claim 18, either the PA controller (56) taught by Oskowsky et al. reference or the state determination circuit (108) taught by King et al. reference was designed for selectively controlling the plurality of transistor amplifiers in the first and second stages to generate a desired output power and each of these stages may have only two parallel transistor amplifiers.

Regarding claims 20-22, Similarly, the circuit as taught by Oskowsky et al. in view of King et al. would carry out the method steps of the claimed invention.

Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclose.

Oskowsky et al. (US 6,377,117), Barlett et al. (US 5,834,975), Wu (US 5,758,269), Andricos (US 4,598,252), Ross (US 6,380,804), Eidson et al. (US 6,255,906), Wang et al (US 6,326,849), and King et al. (US 6,181,208) disclose relevant art to the claimed invention.

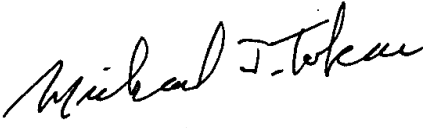
Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 703-605-4244. The examiner can normally be reached on 8:30 to 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Tokar can be reached on 703-305-3493. The fax phone numbers for the organization where this application or proceeding is assigned are 703- 308-7724 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-6789.

KN
December 12, 2002


Michael Tokar
Supervisory Patent Examiner
Technology Center 2800